IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
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Appl No.:	**10/760,344**
Applicant:	**Tzong-Feng Chen**
Filing Date:	**1/21/2004**
Art Unit:	**2154**
Examiner:	**Keefer, Michael E**
Attorney Docket No.:	**66307-007**

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

As required under § 41.37(a), this brief is filed in furtherance of the Notice of Appeal filed on 10/16/2008.

This brief contains items under the following headings as required by 37 CFR § 41.37:

I. Real party in interest

II. Related appeals and interferences

III. Status of claims

IV. Status of amendments

V. Summary of claimed subject matter

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

ALPHA NETWORKS, INC.

II. RELATED APPELAS AND INTERFERENCES

There are no related appeals, interferences, or judicial proceedings known to the undersigned which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. There are 6 claims pending in this application. Claim 1 is the only independent claim; claims 2-6 are dependent claims.
B. Current status of the claims: Claims 1-6 are rejected.
C. The claims on appeal are claims 1-6.

IV. STATUS OF AMENDMENTS

On September 2, 2008, applicant filed a Request for Reconsideration After Final Rejection. On September 10, 2008, the office issued an Advisor Action indicating that the proposed amendment would be entered for the purpose of appeal. However, applicant did not propose any claim amendment in the Request for Reconsideration After Final Rejection.

V. SUMMARY OF CLAIMED SUBJECTED MATTER

The current invention discloses a method to select a data packet transferring path in a ring topology network (specification page 3, line 6 to page 6, line 4, and in Fig. 2). The ring topology network, as illustrated in figures 1 and 2, is a network architecture wherein all the nodes are connected to each other in a circle.

The current application's background discloses that in order to prevent any infinite looping in a ring topology network, the ring topology network has one interruption point for stopping data from further transferring and receiving (specification, page 2, 2nd paragraph, figure 1). Since data packet can not across over this interruption point, the data packet may have to loop around the ring topology network in order to avoid the interruption point, which may not be the shortest physical distance to its designation (specification, page 2, 3rd and 4th paragraph).

To overcome the deficiency in the prior art, the claimed invention provides a plurality of interruption points for a ring topology network, and each interruption point is only corresponding to one particular node on the network, and each interruption point is positioned at the location farthest from its corresponding node (claim 1, 2nd limitation, specification, page 4, lines 5-14). By using each dedicated interruption point as a dividing point for each node, the claimed invention provides two paths for each corresponding node to access every other node on the ring topology network. Since each interruption point is positioned at a location farthest from its corresponding node, both paths for the corresponding node will have equal or almost equal physical length; such that the current invention ensures the shortest data packet traveling distance, and it also preserves the benefit of the interruption point for preventing any infinite looping.

Claim 1 recites, *inter alia*, a method of optimizing packet flow in a ring stackable network architecture, comprising: "implementing in a ring network including a plurality of switches; setting a plurality of interruption points each at a location farthest from a unique one of the switches; dividing a packet output path of each switch into two different transfer paths;selecting either transfer path based on an initialization when one of the switches is about to send a packet to the other switch; and sending the packet from one switch to the other switch along the selected transfer path, thereby achieving purposes of optimizing flow and fully utilizing available bandwidth."

Support for limitation recited in the claim 1 can be found in the specification, page 4, lines 5-14, and figure 2.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ramfelt et al. (U.S. Patent No. 6,106,338)

VII. ARGUMENT

Claims 1-6 are not anticipated by Ramfelt under 35 U.S.C. § 102(b).

Claim 1 recites a method of optimizing packet flow in a ring stackable network architecture, comprising, *inter alia*, "implementing in a ring network including a plurality of switches; setting *a plurality of interruption points* each at *a location farthest from a unique one of the switches*; *dividing a packet output path of each switch into two different transfer paths*;selecting either transfer path based on an initialization when one of the switches is about to send a packet to the other switch; and sending the packet from one switch to the other switch

along the selected transfer path, thereby achieving purposes of optimizing flow and fully utilizing available bandwidth." (emphasis added)

Ramfelt also discloses a method to select data packet transferring path in a ring topology network (abstract). However, Ramfelt discloses a different approach to select the path; thus, Ramfelt fails to disclose every recited limitations as required under 35 U.S.C. § 102(b).

Ramfelt discloses selecting a path between the path D1 (figure 1, counter clockwise/outer ring) and the path D2 (figure 2, clockwise/inner ring). Ramfelt discloses a formula for the path selection (column 7, last paragraph, and column 8, 1st paragraph). Ramfelt states that "the shortest way may be calculated as the smallest value of: (a) the chronological number of the destination node minus the chronological number of the source node…(b) chronological number of the source node plus the total number of nodes in the ring topology." (Ramfelt, column 8, lines 3-9). According to the formula, Ramfelt uses the designation node to calculate and compare the traveling distances for traveling on either D1 or D2, and then Ramfelt selects the shorter path based on the result of the comparison. Applicant respectfully submits that Ramfelt discloses using the designation node to calculate the traveling distances for each path; Ramfelt does not disclose setting a plurality of predetermined interruption points for each node; and Ramfelt's designation node is not the recited interruption point as explicitly defined the specification.

The Office Action dated July 16, 2008 alleged that "since the calculation to determine whether to send packets along the counter clockwise or clockwise path is made by determining which path is shorter, an 'interrupt' point is created at the midpoint of each segment." (Office Action, page 2, last paragraph). Applicant respectfully disagrees and submits that the cited section does not disclose the recited interruption point as explicitly defined in the specification. Applicant further respectfully submits that since the designation point can be

any node on the ring topology network, the designation point is not inherently a midpoint as the Office Action asserted. The claim 1's limitation provides that the interruption point is at a location farthest from a unique one of the switches, which limits the interruption point's location at a midpoint. Therefore, Ramfelt does not disclose the recited limitation of the interruption point at a location farthest from a unique one of the switches.

The Advisory Action dated September 12, 2008 further alleged that "Ramfelt's math sets 'interruption points' at the point on the ring that is furthest away from each particular node. By determining which prong is shortest, it is creating an 'interruption point' on the exact opposite point of the ring." (Advisor Action, Item 11). Applicant respectfully disagrees and submits that Ramfelt does not disclose setting any interruption point on the ring that is furthest away from each particular node. As discussed above, Ramfelt discloses using the designation node to calculate the traveling distances for each path. Since the designation point can be any node on the ring topology network, the designation point is not inherently a midpoint. Furthermore, Ramfelt's designation node is not the recited interruption point as explicitly defined in the specification.

Applicant respectfully submits that Ramfelt does not disclose setting a plurality of interruption points in the ring topology network; Ramfelt further does not disclose each of the plurality of interruption points corresponding to one node on the ring topology network; Ramfelt further does not disclose positioning each interruption point at the farthest location from its corresponding node; and Ramfelt further does not disclose providing two paths for each node by using its corresponding interruption point as a dividing point. As discussed above, Ramfelt uses the position of the designation node to calculate and select the traveling path. Ramfetl does not set any predetermined interruption point for each switch/node.

As explicitly illustrated in the specification's background and figures 1-2, the recited interruption point prevents any data packet from further transmitting. The recited interruption point is one predetermined fixed point for dividing and selecting the data packet transferring path for every data packet from the corresponding node. Since Ramfelt calculates and selects the path based on each data packet's designation node, and different data packet may have a different designation node, Ramfelt's designation node is not a predetermined fixed point for each corresponding node; thus, Ramfelt's designation node cannot be the recited interruption point.

Applicant further respectfully submits that Ramfelt's calculation formula does not disclose positioning each interruption point at a location farthest from the corresponding node; and it also does not disclose using an interrupt point as a dividing point for two paths. As discussed above, since the interruption point is located at the furthest point from the corresponding node in a ring topology network, and each corresponding node's two paths are divided by the interruption point, each path will have equal or almost equal physical length. Ramfelt uses each data packet's designation node to compare and select the paths. Since each data packet's designation node can be any node on the network, Ramfelt does not disclose the designation node located at the furthest position away from the originating node. And since Ramfelt does not disclose the designation node located at the furthest position away from the originating node, Ramfelt's paths do not have the inherited feature of equal or almost equal length.

For the reasons discussed above, Applicant respectfully submits that the cited reference does not disclose every recited limitation in claim 1.

Claim 2 recites, inter alia, "...wherein each switch comprises a first stacking port and a second stacking port."

Claim 3 recites, inter alia, "…wherein with respect to the packet output path of each switch one transfer path is set as a first transfer path and the other transfer path is set as a second transfer path prior to the initialization, removing one switch, or adding a switch."

Claim 4 recites, inter alia, "…wherein the first transfer path is coupled to the first stacking port and the second transfer path is coupled to the second stacking port."

Claim 5 recites, inter alia, "…wherein a correct one of the first and second stacking ports is selected for a packet based on the initialization when a first computer coupled to one switch is about to send the packet to a second computer coupled to the other switch."

Claim 6 recites, inter alia, "…wherein each switch comprises a path determination software or chip so that when a first computer coupled to one switch is about to send a packet to a second computer coupled to the other switch, the path determination software or chip is adapted to compare and select a correct one of the first and second stacking ports and a correct one of the transfer paths based on a destination of the packet prior to transfer."

Claims 2-6 depend on claim 1, and should be similarly allowable with claim 1 for at least the reasons provided above with regard to claim 1, and on their own merits.

Conclusion

Claims 1-6 are pending in this application. In view of the reasons stated above, applicant prays the board for a favorable decision and reversing the rejection on the record accordingly. A copy of claims 1-6 is attached hereto as Claims Appendix.

Respectfully submitted,
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VIII. CLAIMS APPENDIX

1. A method of optimizing packet flow in a ring stackable network architecture, comprising:

implementing in a ring network including a plurality of switches;

setting a plurality of interruption points each at a location farthest from a unique one of the switches;

dividing a packet output path of each switch into two different transfer paths;

selecting either transfer path based on an initialization when one of the switches is about to send a packet to the other switch; and

sending the packet from one switch to the other switch along the selected transfer path, thereby achieving purposes of optimizing flow and fully utilizing available bandwidth.

2. The method of claim 1, wherein each switch comprises a first stacking port and a second stacking port.

3. The method of claim 2, wherein with respect to the packet output path of each switch one transfer path is set as a first transfer path and the other transfer path is set as a second transfer path prior to the initialization, removing one switch, or adding a switch.

4. The method of claim 3, wherein the first transfer path is coupled to the first stacking port and the second transfer path is coupled to the second stacking port.

5. The method of claim 4, wherein a correct one of the first and second stacking ports is selected for a packet based on the initialization when a first computer coupled to one switch is about to send the packet to a second computer coupled to the other switch.

6. The method of claim 4, wherein each switch comprises a path determination software or chip so that when a first computer coupled to one switch is about to send a packet to a second computer coupled to the other switch, the path determination software or chip is adapted to compare and select a correct one of the first and second stacking ports and a correct one of the transfer paths based on a destination of the packet prior to transfer.

IX. EVIDENCE APPENDIX

No evidence beyond the cited references.

X. RELATED PROCEEDING APPENDIX

There are no related appeals, interferences, or judicial proceedings known to the undersigned which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.